Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEFFREY A. GIACOMEL

Appeal No. 2003-1097
Application 09/650,335

ON BRIEF

Before COHEN, FRANKFORT, and STAAB, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 4, 6, 7 and 20 through 23. Claims 3, 5, 8 and 10 have been withdrawn from further consideration by the examiner as being directed to non-elected species. Claims 9 and 11, the only other claims remaining in the application, have been indicated to contain allowable subject matter, but are objected

to on grounds that they depend from rejected claims. Claims 12 through 19 have been canceled.

Appellant's invention is directed to an apparatus used for rapidly changing the temperature of a mass of product. Independent claim 1 is exemplary of the subject matter on appeal and reads as follows:

1. An apparatus for rapidly changing the temperature of a mass of product, comprising:

at least two input heat transfer elements extending into the mass of product, the input heat transfer elements being in parallel spaced planes;

at least one output heat transfer element in thermal contact with the input heat transfer elements and exposed to an ambient temperature environment to transfer thermal energy between the product mass and the ambient temperature environment.

The sole prior art reference relied upon by the examiner in rejecting the appealed claims is:

Root et al. (Root) 3,229,757 Jan. 18, 1966

Claims 1 and 4 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regard as the invention.

Claims 1, 2, 6, 7, 20, 22 and 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Root.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Root.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the examiner's answer (Paper No. 16, mailed December 12, 2002) for the reasoning in support of the rejections, and to appellant's brief (Paper No. 15, filed October 26, 2002) and reply brief (Paper No. 17, filed February 19, 2003) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied Root patent, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determinations which follow.

With regard to the examiner's rejection of claims 1 and 4 under 35 U.S.C. § 112, second paragraph, as being indefinite, we are in agreement with the examiner as to the ambiguity concerning whether these claims are directed to the heat exchange apparatus *per se* or to the heat exchange apparatus in combination with other components, e.g., the "mass of product" in claim 1, line 3, or the "pan" in claim 4. Claim 1 appears to be directed to the apparatus *per se*, but includes a positive recitation of at least two input heat transfer elements therein "extending into the mass of product." If, as appellant asserts in the brief and reply brief, it is not intended that claim 1 claim the mass of product, then claim 1 should be amended to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, claim 1 might be amended to more particularly define the apparatus as comprising at least two input heat transfer elements "for extending into the mass of product" or "adapted to extend into a mass of product."

As for claim 4, this claim sets forth that the mass of product inferentially mentioned in the preamble of claim 1 is "in a pan" and then includes the further limitation of "said at least one input heat transfer element contacting the bottom of the

pan." This claim is indefinite because there is no proper antecedent basis for "said at least one input heat transfer element" (emphasis added) and because the pan appears to be positively recited as forming part of the apparatus. If, as appellant asserts in the brief and reply brief, it is not intended that the mass of product or the pan be elements of claim 4, then claim 4 should be amended to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, claim 4 might be amended to more particularly define the apparatus as including "said at least two input heat transfer elements adapted for contacting the bottom of the pan."

Notwithstanding appellant's right to define an environment for the elements of the claim, the scope of the claim must nonetheless be clear and definite and thus comply with the requirements of 35 U.S.C. § 112, second paragraph. In the present case, claims 1 and 4 on appeal do not comply with the requirements of 35 U.S.C. § 112, second paragraph, and for that reason the examiner's rejection of claims 1 and 4 as being indefinite is sustained.

The next rejection for our review is that of claims 1, 2, 6, 7, 20, 22 and 23 under 35 U.S.C. § 102(b) as being anticipated by Root.[1] In this instance, the examiner has determined that the heat dissipator apparatus of Root corresponds exactly to the structure of the heat exchange apparatus set for in the above enumerated claims on appeal. More specifically, the examiner has found that the one-piece, extruded aluminum heat exchange apparatus of Root includes two banks of parallel heat distribution fins (a, b, c, d and w, x, y, z) integrally connected with a web member (17, 18, 19). In the examiner's view, while Root does not disclose the use intended by appellant, the apparatus of Root is fully capable of such use and clearly includes heat transfer fins on one side of the web member, for

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[1] In addressing this rejection, we have construed claim 1 on appeal in the manner urged in appellant's brief and reply brief, i.e., as not including the mass of product as an element of the claim. However, we commend to the attention of appellant and the examiner U.S. Patent No. 2,688,467 to R. W. Leatzow, which patent is of record in the present application and discloses a device for cooling beverages wherein a lower portion of the device includes at least two input heat transfer elements or fins located in parallel spaced planes and extending into a mass of product (beverage) and wherein the device further includes an upper portion carrying a multiplicity of output heat transfer elements in thermal contact (communication) with the input heat transfer elements and exposed to an ambient temperature environment to transfer thermal energy between the product mass and the ambient temperature environment.

example, the lower side as seen in Figure 1 of Root, which fins are capable of serving as input heat transfer elements if located in a mass of product, and heat transfer fins on the opposite side of the web member (upper side as seen in Fig. 1 of Root) which are capable of serving as output heat transfer elements and of being exposed to an ambient temperature environment so as to transfer thermal energy between a mass of product in which the input heat transfer elements may be located and the ambient temperature environment.

An anticipation under 35 U.S.C. 102(b) is established when a single prior art reference discloses, either expressly or under principles of inherency, each and every element or limitation of a claimed invention. See In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed Cir 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). However, we observe that the law of anticipation does not require that the reference teach what the appellant has disclosed but only that the claims on appeal "read on" something disclosed in the reference, i.e., all limitations of the claim are found in the reference. See Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir.

1983). While it is true that there is nothing in the Root patent which expressly indicates that the heat transfer apparatus therein may be used in the manner set forth in appellant's claims on appeal, as we noted above, we agree with the examiner that the apparatus of Root is fully responsive to the subject matter set forth in claims 1, 2, 6, 7, 20, 22 and 23 on appeal and is inherently capable of being used in the manner required in those claims.

As was made clear in In re Schreiber, 128 F.3d at 1477, 44 USPQ2d at 1431, by choosing to define an element functionally as in appellant's claims on appeal, appellant assumes a risk, that risk being that where the U.S. Patent and Trademark Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. In the present case, appellant has provided no evidence to prove that the heat transfer apparatus of Root lacks any of the structural elements of the

claims on appeal, or that the subject matter shown to be in the prior art does not possess the characteristic relied upon, i.e., the limitations functionally defined in the claims on appeal.

We therefore agree with the examiner that the differences in the intended use of the heat transfer apparatus disclosed in Root and appellant's heat transfer apparatus do not patentably distinguish the claimed apparatus from that of Root.

For the above reasons, we will sustain the examiner's rejection of claims 1, 2, 6, 7, 20, 22 and 23 under 35 U.S.C. § 102(b) as being anticipated by Root.

The last rejection for our review is that of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Root. In this instance, the examiner recognizes that Root does not teach or suggest the use of heat transfer elements coated with a heat conductive material as defined in claim 21 on appeal. Nonetheless, the examiner has apparently concluded that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to provide the heat transfer elements

(a, b, c, d and w, x, y, z) of Root with such a coating of heat conductive material. The examiner's basis for this contention is apparently founded on Official Notice and the assertion that use of such coatings is old and well known and of such notorious character in the art that citation of a reference to such effect is deemed unnecessary. In the answer, pages 4-5, the examiner has further concluded that since appellant did not challenge the above-noted assertion regarding coatings of heat conductive material being old in the art, appellant has now conceded that such coatings are admitted prior art.

Even if we assume that coatings of heat conductive material are known in the art and that appellant has conceded such point, we share appellant's view as set forth on page 4 of the reply brief that there is no suggestion or incentive in Root to coat the aluminum fins therein with heat conductive material, since such elements apparently already function properly for their intended purpose. The mere fact that coatings of heat conductive material are known in the prior art, in and of itself, provides no motivation or suggestion for modifying the particular

apparatus of Root to include such coatings. Thus, we will not sustain the examiner's rejection of claim 21 under 35 U.S.C. § 103(a).[2]

As is apparent from our above determinations, the decision of the examiner rejecting claims 1 and 4 of the present application under 35 U.S.C. § 112, second paragraph has been affirmed, as has the examiner's decision rejecting claims 1, 2, 6, 7, 20, 22 and 23 under 35 U.S.C. § 102(b) based on Root. However, the examiner's rejection of claim 21 under 35 U.S.C. § 103(a) based on Root has not been sustained.

In accordance with the foregoing, the decision of the examiner is affirmed-in-part.

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[2] If the examiner is of the opinion that prior art exits which would have provided an incentive or suggestion for applying a coating of heat conductive material to the aluminum fins of Root, then such prior art should be cited and properly applied.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

IRWIN CHARLES COHEN)
Administrative Patent Judge)
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Charles E. Frankfort)
CHARLES E. FRANKFORT) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
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